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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,351

06/23/2006

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512.46311X00

3349

20457 7590 11/12/2009  
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EXAMINER

FREEMAN, JOHN D

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

11/12/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,351	<b>Applicant(s)</b> ONISHI, HIDESHI	
	<b>Examiner</b> John Freeman	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-2, 4-6, and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miharu et al. (WO 96/18681) in view of Ninomiya et al. (US 6,184,288) and Saxton (US 5,032,632).
3. Regarding claims 1-2:
4. Miharu et al. (hereafter Miharu) disclose a thermoplastic resin composition comprising EVOH, an ionomer, and a polyamide, i.e. a blend (p3 ln 2-8). Suitable polyamides include nylon 6, nylon 66, and nylon 6/66 copolymer (p7 ln 5-9). The amount of polyamide ranges from 2 to 50 parts by weight relative to 100 parts by weight of EVOH. The thermoplastic can be used in a laminate with other layers including layers of polyamide and polyolefin (p9 ln 30-p10 ln 25). Polyolefins include polyethylene and polypropylene (p9 ln 34-35). Miharu discloses a laminate wherein a layer of the thermoplastic resin is surrounded by a layer of polyamide and a layer of polyolefin, which corresponds to Applicant's b/a/c structure. Example film thicknesses include 50 µm (p11 ln 33). Furthermore, the presently claimed thicknesses are merely dependent on the intended use for the film, and were well within the skill level of the ordinary artisan.
5. Miharu is silent with regard to a ratio of alkaline metal salt to alkaline earth metal salt, and a phosphorous compound.
6. Ninomiya et al. (hereafter Ninomiya) disclose ethylene-vinyl alcohol (EVOH) pellets and films made from said pellets (col 1 ln 7-12). The EVOH pellets exhibit improved moldability and provide moldings with good appearance and quality and good stretchability (col 2 ln 1-6). Ninomiya saponifies ethylene-vinyl acetate to create the EVOH (col 2 ln 57-63). The pellets contain a boron compound (c1), an alkaline metal acetate (c3), an alkaline earth metal acetate (c4), and a phosphoric acid compound (c5) (col 2 ln 17-23). Ninomiya teaches the use of antioxidant compounds in the pellets (col 7 ln 24).

Art Unit: 1794

7. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the EVOH pellets as taught by Ninomiya in the thermoplastic composition taught by Miharuru to provide good moldability and stretchability, as well as resultant molding having a good appearance.

8. Both Miharuru and Ninomiya are silent with regard to a hindered phenol antioxidant.

9. Such antioxidants were well-known in the art at the time of the invention. For example, Saxton teaches an EVOH polymer having metal salts and a hindered phenolic antioxidant (col 2 ln 61-65, col 3 ln 1-2).

10. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use a hindered phenolic antioxidant in the composition taught by the combination of Miharuru in view of Ninomiya to improve the composition's resistance to oxidation.

11. Regarding the metal salts, Ninomiya mentions sodium acetate as an alkali metal salt (col 5 ln 5-9). The pellet contains 0.0001 to 0.1 part by weight of alkali salt (c3) and 0.0001 to 0.1 part by weight of alkaline earth metal salt (c4). As such, the amounts used result in a range of ratios that overlap with Applicant's range.

12. Ninomiya reports the weight of phosphoric acid compound (c5) in terms of weight, and not parts-per-million as Applicant describes. The examiner takes the position that Ninomiya's disclosure of 0.0005 to 0.1 parts by weight of phosphoric acid (col 4 ln 33) overlaps with the range claimed by Applicant because Ninomiya's range is so broad. Furthermore, the range disclosed by Applicant would have been made obvious to one of ordinary skill in the art through routine experimentation.

13. Ninomiya is silent with regard to the hindered phenol antioxidant content as claimed by Applicant. Saxton reports the weight of the hindered phenol antioxidant in terms of weight, and not parts-per-million as Applicant describes. The examiner takes the position that Saxton's disclosure of 0.05 to 0.5 weight percent (col 3 ln 1-2) overlaps with the range claimed by Applicant. Furthermore, the range disclosed by Applicant would have been made obvious to one of ordinary skill in the art through routine experimentation.

14. With respect to the overlapping ranges discussed above, as set forth in MPEP 2144.05, in the case where the claimed range "overlap or lie inside ranges disclosed by the prior art", a *prima facie* case

Art Unit: 1794

of obviousness exists, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

15. Regarding claims 4 and 11:

16. As mentioned, Ninomiya's EVOH contains a boron compound (c1).

17. Regarding claims 5-6, 12-16:

18. Polyolefin and polyamide layers provide properties to laminates well-known in the art. For example, polyolefin layers are moisture barriers, and polyamide layers are oxygen barriers. Therefore at the time of the invention, one of ordinary skill would arrive at a structure wherein the polyolefin layer is the innermost layer, and the polyamide layer is the outermost layer in the laminate through routine experimentation depending on the end use. For example, in food packaging, a moisture barrier may be needed for a product, and therefore be located on the innermost layer next to said product, while an oxygen barrier is needed to keep the product from spoiling, and is located on the outer portion of the package.

19. Claims 3 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miharu et al. (WO 96/18681) in view of Ninomiya et al. (US 6,184,288) and Saxton (US 5,032,632) as applied to claims 1-2, 4-6, and 11-16 above, and further in view of Tachibana et al. (US 6,169,161).

20. Miharu in view of Ninomiya and Saxton is previously explained. Each reference is silent with respect to an end-capped polyamide.

21. The method of end-capping a polyamide was well-known in the art at the time of the invention. End-capping changes the terminal groups, as evidenced by Tachibana et al. (col 7 ln 31-41). The terminal group concentrations affect the overall properties of the polyamide polymer (col 8 ln 14-40).

22. Therefore at the time of the invention, it would have been obvious to one of ordinary skill in the art to use an end-capped polyamide depending on desired properties, in the combined invention of Miharu in view of Ninomiya and Saxton.

***Claim Rejections - 35 USC § 112***

23. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

24. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

25. Claim 1 recites “the laminated article *includes* a layer composition selected from the group consisting of...” The specification does not appear to support the limitation that the article “includes” these compositions, which includes not only those specifically recited compositions, but opens the claim to any other layer composition.

26. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

27. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

28. Claim 1 recites “the laminated article includes a layer composition selected from the group consisting of...” The scope of the claim is confusing because the inclusive “includes” limitation appears to conflict with the exclusive “consisting of” language of the claim, i.e. it appears the claim can read on articles having compositions other than those listed in the defined group. The examiner suggests Applicant replaces “includes” with “has” or “is”.

Art Unit: 1794

***Response to Arguments***

29. Applicant's arguments filed 15 July 2009 have been fully considered but they are not persuasive.

30. Regarding 35 USC 112:

31. The examiner appreciates Applicant's efforts to address issues under 35 USC 112. Except for the issues identified in this Office Action, Applicant's amendments have addressed previous issues.

32. Regarding 35 USC 103:

33. Applicant notes the melt-kneaded nature of the blend, and further notes the potential pitfalls in making the blend (p9). However, the identified features are not found in the present claims. Furthermore, even if they were, it is not clear that the blend disclosed by Miharu in view of Ninomiya and Saxton would not meet these features, since they appear to contain the same blend as presently claimed.

34. Applicant states Miharu's use of ionomer renders any film made from the disclosed blend unsuitable for retort packaging. The examiner notes the present claims are directed broadly to a "laminated article", not any specific type of packaging. The claims also use inclusive language, i.e. "comprising," and therefore encompass blends containing ionomers as taught by Miharu. Applicant also notes Miharu does not disclose the use of the film in retort packaging as proof of Applicant's assertion. The lack of such disclosure, however, cannot prove Miharu's invention is incapable of being used in retort packaging. There are no doubt a great number of uses for Miharu's films that are not specifically mentioned by Miharu.

35. Applicant states Miharu does not teach use of metal salts and phosphorous compound as claimed (p10). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The examiner maintains Miharu in view of Ninomiya and Saxton disclose an article having all the features of the present claims.

36. Applicant submits Ninomiya's polymer is a copolymer of EVOH and an amide-containing monomer, while the present is obtained by a blending EVOH and PA (p10). As explained in the previous Office Action, Ninomiya does not require the EVOH-polyamide copolymer: Ninomiya teaches a simple

Art Unit: 1794

EVOH polymer. Nowhere in the rejections does the examiner rely on Ninomiya's teaching of a EVOH-polyamide copolymer, nor does Ninomiya's disclosure require said copolymer to be used. As stated in paragraph 33 of the previous Office Action:

...Miharu discloses a blend of EVOH and PA, and Ninomiya discloses EVOH pellets having a boron compound (c1), an alkaline metal acetate (c3), an alkaline earth metal acetate (c4), and a phosphoric acid compound (c5). At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the EVOH pellets as taught by Ninomiya in the thermoplastic composition taught by Miharu to provide good moldability and stretchability, as well as resultant molding having a good appearance.

37. Applicant provides a Table highlighting differences between Applicant's intended invention and the prior art. The examiner does not find the information provided persuasive for several reasons.

- First, note "the arguments of counsel cannot take the place of evidence in the record", *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner's position that the arguments provided by the applicant regarding "specific advantageous effects" must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), "the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001".
- Second, as noted previously the presently *claimed* invention encompasses a blend having ionomer as taught by Miharu.
- Third, it is not clear what are the differences in properties between the various films. For example, while the present invention may have the "advantageous" effect of "delamination resistance", the Table does not explicitly provide evidence that the prior art does not also possess "delamination resistance", but rather the Table is simply silent with regard to such properties.
- Fourth, the information is not commensurate in scope with the claims. There is no discussion of the effects the various ratios may have on the properties, or how those may be unexpected.
- Finally, the Table treats the prior art separately. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Since the examiner relies on Miharu in view of Ninomiya and Saxton,



Art Unit: 1794

any information regarding the prior art should clearly indicate how the combination of prior art cannot render the present claims obvious.

38. Applicant's arguments regarding Saxton and Tachibana are not persuasive. Note that while Saxton and Tachibana do not disclose all the features of the present claimed invention, they are used as teaching reference, and therefore, it is not necessary for these secondary references to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather these references teach a certain concepts, namely hindered phenol antioxidant and end-capped polyamides, and in combination with the primary reference, disclose the presently claimed invention.

### ***Conclusion***

39. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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